State of Iowa - Return on Investment Program / IT Project Evaluation

SECTION 1: PROPOSAL

Project Name: <u>Unified Front End</u>   Date: <u>9/29/00</u>

Agency Point of Contact for Project: <u>Randy Clemenson</u>

Agency Point of Contact Phone Number / E-mail: <u>281-5780 / rclemen@dhs.state.ia.us</u>

Executive Sponsor (Agency Director or Designee) Signature: _____
                                                              Steve Mosena

Is this project necessary for compliance with a Federal standard, initiative, or statute? (If "Yes," cite specific requirement, attach copy of requirement, and explain in Proposal Summary)	❑ Yes	X No
Is this project required by State statute? (If "Yes," explain in Proposal Summary)	X Yes	❑ No
Does this project meet a health, safety or security requirement? (If "Yes," explain in Proposal Summary)	X Yes	❑ No
Is this project necessary for compliance with an enterprise technology standard? (If "Yes," explain in Proposal Summary)	X Yes	❑ No
Does this project contribute to meeting a strategic goal of government? (If "Yes," explain in Proposal Summary)	X Yes	❑ No
Is this a "research and development" project? (If "Yes," explain in Proposal Summary)	❑ Yes	X No

PROPOSAL SUMMARY:

In written detail, explain why the project is being undertaken and the results that are expected. This includes, but is not limited to, the following:

1. A pre-project (before implementation) and a post-project (after implementation) description of the system or process that will be impacted.

   A. Pre-Project

   This initiative is mandatory for DHS to achieve several goals and State Law outlined in HF 2205. Currently, DHS has over 80 separate systems consisting of mainframe applications, servers, and server applications. In many cases, a program is supported by a combination of all three. The programs on the mainframe are primarily JCL and COBOL, however, many are supplemented with server applications some of which are off-the-shelf applications and others are internally developed applications. These systems are supported by a wide variety of specialists, both hardware and software. Many of the programs are mandated by either State or Federal Government. For Federal programs, DHS often is not given a choice of system or platform to use. The government

will specify a program or platform to keep data and reporting uniform among the different states in the program. See Diagram 1 for an overview picture of the current DHS systems. Specifically notice both the number of systems along with multiple inter-dependencies of the systems. To comply with HF 2205, DHS Action Plan Goals, the Governor's initiatives, uniform Inter-Agency standards, and increased Cross-Agency support, DHS's systems must either be completely re-designed or a Unified front-end must be installed.

The initial analysis conducted to re-design and overall the current systems estimates the project to cost between $80 and $100 MILLION and most likely would not be accomplished in time to meet the "completely "e" in 2003" goal. However, this is not necessary or desirable due to the advances in database and enterprise technology. To install a unified front end the initial estimates conclude the total costs would be less than $15 million and can be completed well within the time requirement for DHS to meet the 2003 goal.

Several years ago DHS began investigating this issue and identified a data warehouse as a critical element to solving this problem. Currently, the data warehouse is funded and the DHS ramp phase should be complete by the end of SFY 2002. Additionally, two other projects complete the picture of how this system fits into DHS's information strategy. These are the Iowa Resource House and the e-commerce initiative. All 4 projects are inter-related and are being developed concurrently as an integrated package.

B. Post-Project

As mentioned, this is 1 of 4 inter-related initiatives. See Diagram 2 for a pictorial representation of what the system will look like upon completion. The final system will take advantage of the strengths of each component while mitigating the weaknesses of each system. For example, if the mainframe is down, employees can continue accessing information and entering Customer data through the warehouse. The following is a list of the key features of the system upon completion with a brief description.

1. Achieve 2003 Goal – This initiative is the logical link between the systems and the users. Without this initiative, to become e-based, a separate and unique e-initiative would have to be accomplished on each system (over 80 separate initiatives).

2. Establish and Implement Enterprise Standards – To achieve enterprise standardization each system would have to be re-designed. With this initiative, the front end is standardized, through ITD, with enterprise standards. The front end takes care of all translations and transactions needed to provide a uniform look across all systems (some standardization is accomplished through the data warehouse also).

3. Cross-Agency Connectivity – Integration with other State Agencies can be accomplished quickly and simply since the interconnect is accomplished through a standardized front end and not at the systems level.

4. Elimination of System Specific I/O Screens – Currently, all input and output screens must be built by programmers who have specialized knowledge in the particular system. With this system, With reduced resources, this normally falls to contractors and takes enormous effort and money to accomplish. It can easily cost over $10,000 to build a simple screen to a system.

5. Correlation of Data – Since users need information from several systems, they must get output reports from each system and then manually put the data into a spreadsheet or other document to compare and analyze the information. This problem will be eliminated. The user will have data schemas available to them based on their specific

security levels and information requirements. This data will come from several systems, however, the user will only see the front end system.

6. <u>Standardization of Data</u> – The current systems were developed over several years. During this time many common data fields (e.g. name) were programmed differently. This requires special programming each time a user needs to cross-check systems information. This system will resolve all these issues at the front-end level, thereby eliminating the need to reprogram each system with new ITD established data definitions and standards.

7. <u>Relational Data</u> – This system, in concert with the data warehouse, will create a relational information system. Instead of having to manually evaluate data from several sources to ensure proper accountability, this system will install this feature. This is the baseline to establishing both a Single-Face-to-Customer where one person can help a Customer identify all services they are eligible to receive and to ensuring accountability across programs and to oversight entities.

8. <u>Elimination of Redundancies</u> – Currently the same information must be entered into several systems, through separate systems screens, and often in differing formats. This creates high volumes of redundant data on the systems which must be continually cross-checked for accuracy. This system eliminates this issue by writing to all systems which need the same data. Also, with data management tools currently available, we can begin eliminating hardened redundancies and free up expensive mainframe resources while shortening the processing time of system files.

9. <u>Reduced Training</u> – When people transfer to different programs, they have to completely learn new systems. With an integrated front end, the only changing is the data schema available to them. Once trained, the can be operational in a new job significantly faster.

10. <u>Availability</u> – Information users will no longer be dependent on researchers or programmers. Nor will they have to wait for output. With client tools currently available, the system information will be readily available at the individuals desk.

11. <u>Security</u> – With a unified front end there will be significantly less security issues to manage. The primary security will be accomplished through the front end and not have to be continually updated on each system. Unauthorized access will be quicker and easier to detect.

12. <u>Accessibility</u> – Services will be easier to access by out Customers. This system will enable integration, across all current system boundaries, of total services available, eligibility, and will allow a Customer to begin access to the service faster, getting them the service they need to ensure Health, Safety, and Stability while promoting Self-Sufficiency.

2. A summary of the extent to which the project provides tangible and intangible benefits to either Iowa citizens or to State government. Included would be such items as qualifying for additional matching funds, improving the quality of life, reducing the government hassle factor, providing enhanced services, improving work processes, complying with enterprise technology standards, meeting a strategic goal, avoiding the loss of matching funds, avoiding program penalties/sanctions or interest charges, avoiding risks to health/security/safety, complying with federal or state laws, etc.

This initiative contains numerous benefits, both tangible and intangible across a wide spectrum of constituencies. For simplicity, they will be listed with a T (tangible benefit), I (intangible benefit), or TI (elements of both).

a. (TI) – Reconnection Iowans to Government -Critical component to meeting the DHS's Action plan to reconnect Iowans to DHS services by making access more convenient both in method and location. Reduces costs of determining availability, eligibility, and accessibility and starting the process of getting the Customer the service they need.

b. (T) – Eliminates redesign costs of current systems. Decreases maintenance costs of each system. Transfers many routine and regular reporting from expensive mainframe processes to servers and workstations.

c. (T) – Matching Funds. As a DHS initiative qualifies for matching Federal funds.

d. (I) – Provides mechanism (through client or e-based access) for State Executives such as the Governor's Staff, Elected State and Federal Representatives (House & Senate) , and Oversight Executives to access information directly from their workstation.

e. (TI) – Establishes DHS as open architecture, uniform standards-based integrated system. Enables goal of integrating DHS with other State Agencies to provide higher levels of service and decreases costs associated with upgrades and system enhancements.

f. (TI) – Transforms DHS from being a reactive service provider into a proactive service provider. With integration into other State systems, queries can be run to identify Iowans who may be eligible for State services and notify them electronically.

g. (I) – Self-Sufficiency. Promotes Customer and Community self-sufficiency by creating the entire population of Iowa as potential service provisioners. For example, a person in need could turn to their minister, neighbor, or other member of the community for help in identifying the availability of services.

h. (T) – Costs of supplying services. Integrating services allows a customer who has gone through the eligibility component of the system to simultaneously register for all services they are eligible to receive.

i. (T) – More money to services instead of support. With an integrated front end transaction and support costs (e.g. programming, reporting) are decreased allowing more DHS money to be used to provide more services to more customers.

3. A summary that identifies the project stakeholders and how they are impacted by the project.

Literally EVERY Iowan and every State organization is positively impacted by this project.

- Iowa Legislature – Access to better information for better programs for Iowans.
- Customers – Simpler, easier to use information of DHS services, eligibility screening, and uniform and unified access to multiple services.
- DHS Employees – Better service to our Customers.
- Other State Agencies – Reduced costs involved in standardizing their access into DHS systems.
- Providers – Better cross-program accountability of services provided. Better management of venders included in DHS services programs.

SECTION 2: PROJECT PLAN

Individual project plans will vary depending upon the size and complexity of the project. A project plan includes the following information:

1. Agency Information
Project Executive Sponsor Responsibilities:

Steve Mosena
Administrator, Division of Data Management
Department of Human Services

Organization Skills:
1. Systems Architect – An individual who posses a significant amount of knowledge and expertise building front-ends to legacy systems.
2. Program Manager – Internally selected individual to oversee the strategic planning and operational implementation of the planned components. This asset is currently in place as permanent party DHS full-time employee.
3. Systems Analyst (Legacy) – Systems Analysts currently in place, either through contract or permanent party status, who have expert knowledge in the current systems used by the Department of Human Services.
4. System Analyst (New System) – One or more individuals who posses expertise with the new system being selected as the unified front end. The two groups of Systems Analysts comprise the primary team building the unified front end.
5. Program Analysts – Individuals with extensive programming skills in the new system selected for the front end.
6. Business Analysts – Program representatives who understand the information requirements of the DHS supported programs.

Until a complete situation analysis is completed as the first item in this program, a complete listing and numbers of people required will be unavailable. Additionally, work being done for the data warehouse will provide insight into the opportunities available.

2. Project Information
Mission, Goals, Objectives:

A. **Expectations**: This program will create a unified front-end to all current and under-development DHS systems which provides:
   a. Universal accessibility to DHS systems via a singular, common system or program.
   b. Support Cross-Agency accessibility of DHS systems will minimal training requirements for external users.
   c. Support e-commerce, web-based interfaces using common, existing, open architectures, protocols, and interfaces.
   d. Eliminate the use of legacy-based input/output programming.
   e. Provide the physical I/O layer integrated with DHS's Data Warehouse, Iowa Resource House, e-commerce, and all DHS programs & users.

B. **Measures**: The principle metrics for this project, when integrated with Data Warehouse, Iowa Resource House, and e-commerce are:

    a. Information detailing Availability, Eligibility, and Accessibility for all DHS programs is universally accessible by all Iowans via both internet and connected services.

    b. Any potential DHS service recipient can initiate and/or complete the service program registration process from the computer which is most convenient for them to use. Physical contact with a DHS service provisioner is not, by default, a mandatory requirement.

    c. Key and critical information needed by Lawmakers, Agency Executives, Provisioners at all levels (including private and non-profit support groups), and service recipients is immediately and readily available.

C. **Environment:** Input will be provided through a variety of means and current program initiatives. Business issues will be addressed through the Data Warehouse, Iowa Resource House, and e-commerce initiatives. Global systems standardization input will come from ITD. Physical data inter-connectivity input comes from those tasked within this specific initiative. This is ONE element of the global DHS initiative detailed in DHS's action plan and HF 2205 covering "completely 'e' by 2003".

D. **Project Management and Risk Mitigation**: Project management will be accomplished via senior DHS management through an identified program manager. Risks are reduced and mitigated by incorporating this project as an element of the global DHS e-commerce initiative. Data Warehouse employs a bottom-up methodology while e-commerce employs a top-down. This initiative provides the interconnectivity of those two projects while Iowa Resource House focuses on specific business issues.

E. **Security / Data Integrity / Data Accuracy / Information Privacy**: No additional requirements outside current security practices. E-commerce will address the security issue of global access. Data Warehouse provides a detailed data analysis and verification.

3. Current Technology Environment (Describe the following):

A. **Software (Client Side / Server Side / Midrange / Mainframe)**

- DHS uses a variety of software, some off-the-shelf such as Microsoft Office with others being hard code internally generated in JCL and/or CoBOL. DHS uses both client-server and mainframe architectures.
- Additional software requirements will be determined by this initiative.

B. **Hardware (Client Side / Server Side / Mid-range / Mainframe):**

- Additional hardware, if required, will be identified as part of this project.

4. Proposed Environment (Describe the following):

A. Software (Client Side / Server side / Mid-range / Mainframe)

- Client-server system architecture will be the primary software philosophy of this project. Connectivity means will be determined as part of this project.

B. Hardware (Client Side / Server Side / Mid-range / Mainframe)

- Unknown at this time. However, it is anticipated opportunities will exist to migrate existing hardware into new technology applications developed as part of this program.
- Since the expected population available to access information will significantly increase, additional hardware is expected. However, the use of improved technical management of systems will mitigate this issue.

Data Elements: It is anticipated all data element issues will be addressed primarily through the Data Warehouse and Iowa Resource House initiatives.
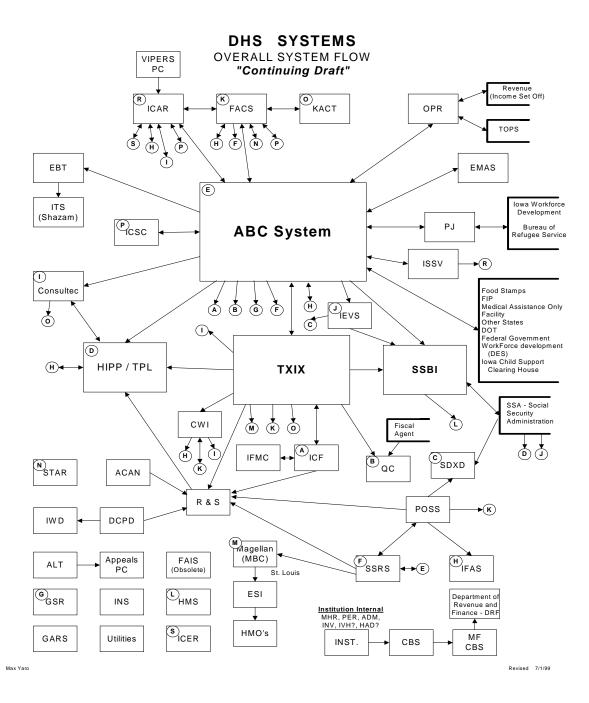
Project Schedule: At this time the project schedule is dependent on the timelines of the Data Warehouse, Iowa Resource House, and DHS's e-commerce initiative. Additionally, the timeline will be not be drilled down until the first two project elements listed below are accomplished.

a. Q3 SFY 2001 – Request for Information.
This is the project initiation phase. Specific funding streams are not required during this element. We will detail our strategic vision to current and potential vendors and request specific information from them detailing alternatives available. Completion of this project comprises an analysis presentation to the Director of Human Services, the State of Iowa's Chief Information Officer, and other designated representatives. The result of this element is a Request for Proposal for a Unified Front-End.
b. RFP & Initial Staffing. (completed Q1 SFY 2002).
Vendor selection and program timeline publication.
c. System Architecture (completed Q2 SFY 2002)
d. System Prototype (complete Q3 SFY 2002)
e. System Ramp (complete Q1 SFY 2003)
f. E-commerce Overlay (complete Q3 SFY 2003).
g. Final Integration's (completed Q2 SFY 2004)

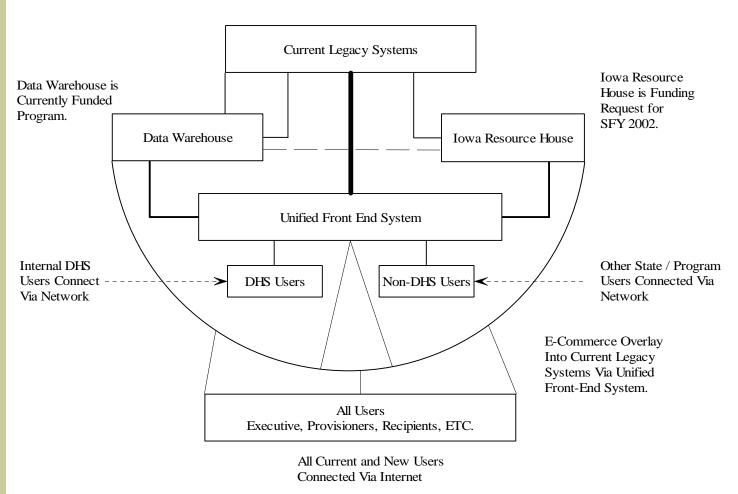See Attached Diagrams:
  Attachment 1: Current Legacy Systems
  Attachment 2: New Global DHS Distributive Information and Management System.

IT Project Evaluation

DHS SYSTEMS
OVERALL SYSTEM FLOW
"Continuing Draft"

VIPERS PC

(R) ICAR ↔ (K) FACS ↔ (O) KACT

OPR ↔ Revenue (Income Set Off)

OPR ↔ TOPS

(S) (H) (P) under ICAR; (I)

(H) (F) (N) (P) under FACS

EBT

ITS (Shazam)

EMAS

(P) ICSC

ABC System

PJ ↔ Iowa Workforce Development / Bureau of Refugee Service

ISSV → (R)

(I) Consultec → (O)

(A) (B) (G) (F)   (H)

(J) IEVS

(C)

Food Stamps
FIP
Medical Assistance Only
Facility
Other States
DOT
Federal Government
WorkForce development (DES)
Iowa Child Support Clearing House

(D) HIPP / TPL

(H)

TXIX

SSBI

SSA - Social Security Administration

(I)

(D) (J)

CWI

(M) (K) (O)

Fiscal Agent

(L)

(H) (K) (I) under CWI

IFMC ↔ (A) ICF

(B) QC

(C) SDXD

(N) STAR

ACAN

R & S

POSS → (K)

IWD ← DCPD

(M) Magellan (MBC) — St. Louis

(F) SSRS ↔ (E)

(H) IFAS

ALT → Appeals PC

FAIS (Obsolete)

ESI

Department of Revenue and Finance - DRF

(G) GSR

INS

(L) HMS

HMO's

GARS

Utilities

(S) ICER

Institution Internal
MHR, PER, ADM, INV, IVH?, HAD?

INST. → CBS → MF CBS

Max Yaro

Revised 7/1/99

Attachment 1: Current Legacy Systems

Current Legacy Systems

Data Warehouse is
Currently Funded
Program.

Iowa Resource
House is Funding
Request for
SFY 2002.

Data Warehouse

Iowa Resource House

Unified Front End System

Internal DHS
Users Connect
Via Network

DHS Users

Non-DHS Users

Other State / Program
Users Connected Via
Network

E-Commerce Overlay
Into Current Legacy
Systems Via Unified
Front-End System.

All Users
Executive, Provisioners, Recipients, ETC.

All Current and New Users
Connected Via Internet

Attachment 2: New Global DHS Distributive Information and Management System.

SECTION 3: Return On Investment (ROI) Financial Analysis

Project Budget:

Provide the estimated project cost by expense category.

Personnel .... $_____
Software .... $___3,000,000___
Hardware .... $___1,000,000___
Training .... $___800,000____
Facilities .... $___200,000____
Professional Services .... $___1,000,000___
Supplies .... $_____
Other (Specify)……….…………$_____
                    Total .... $___6,000,000___

Project Funding:

Provide the estimated project cost by funding source.

State Funds .... $___3,000,000___ .... ___50_____ % of total cost
Federal Funds .... $___3,000,000___ .... ___50_____ % of total cost
Local Gov. Funds .... $_____ .... _____ % of total cost
Private Funds .... $_____ .... _____ % of total cost
Other Funds (Specify) .... $_____ .... _____ % of total cost
            Total Cost: .... $_____ .... _____ % of total cost

How much of the cost would be incurred by your agency
from normal operating budgets (staff, equipment, etc.)? .... $___0_____   ____%

How much of the cost would be paid by "requested IT project funding"? ... $___3,000,000___ __50_%

Provide the estimated project cost by fiscal year: FY__2002_ $___6,000,000_____

                                                      FY__2003 $___3,700,000_____

                                                      FY__2004 $___2,100,000_____

IT Project Evaluation

ROI Financial Worksheet Directions (Attach Written Detail as Requested):

Annual Pre-Project Cost – N/A (Current systems prevent achievement of DHS action plan and HF 2205 e-commerce requirements).

Annual Post-Project Cost – N/A (This system is required to achieve DHS action plan and HF 2205 e-commerce requirements. We expect efficiency gains in current systems maintenance and upgrade costs to cover the anticipated long-term support costs of this initiative. We anticipate this to be a budget neutral project outside of development costs in the long-term).

State Government Benefit – N/A based on cost. However, to achieve State Government Benefit goals of a more accountable and re-connected government, this is a mandatory project for DHS.

Citizen Benefit

1. Reconnecting to Iowans to their Government – This project extends beyond traditional borders and boundaries the ability of Iowans to determine Availability, Eligibility, and Accessibility of DHS managed services and programs.

2. Integrates Availability, Eligibility, and Accessibility – Streamlines and integrates each of these elements and provides an integrated approach from initial information analysis to program registration. This will significantly reduce the costs involved in program overhead for Availability, Eligibility, and Accessibility, putting more resources toward services.

3. Accountable Government – Provides ability for various users (Lawmakers, State Executives, Taxpayers) to access detail information on DHS programs showing program metrics compared to program goals.

Opportunity Value/Risk or Loss Avoidance Benefit – There are a variety of tangible and intangible benefits received from this program.

1. Intangible – Compliance with DHS action plan and HF 2205.

2. Tangible

   a. Availability and Eligibility Costs (A&E)

   Currently, 680,000 Iowans are served daily by DHS. If we assume for conservative estimates DHS services only 680,000 Iowans per year and it takes one hour of involvement between the Iowan and a DHS employee to determine availability and eligibility of the Iowan for DHS services. Also, we use the State minimum wage of $5.15 as the cost application rate.

   680,000 Iowans @ 1 Hour @ $5.15 = $3,502,000 reduced A&E costs to Iowans.

   680,000 DHS Employee Hours @ $5.15 = 3,502,000 reduced DHS A&E costs.

   b. Accessibility Costs

   Assuming only the current 680,000 Iowans currently served daily are the only people proceeding to the Service Access process and the new process reduces 2 hours of their time and ½ hour DHS employee time, using $5.15 as the cost application rate, then reduced access costs are:

   680,000 Iowans @ 2 Hours @ $5.15 = $7,104,000

680,000 DHS employee Time @ $5.15 = $875,500

    c. This project is eligible for matching federal funds.

Total Annual Project Benefit -- $14,983,500 based on the calculations above. However, most benefits are intangible based on State and DHS goals and mandates. Additionally, this benefit does not include the $80 to $100 MILLION required to completely redesign the overhaul the current systems as a separate initiative to meet HF 2205 requirements.

Total Annual Project Cost – Costs for this program are categorized as either development & installation or continuing maintenance. 80% of the projected costs in this proposal are anticipated as either Software or Professional Services charges. All multi-year costs indicated above are planned as development and installation costs. It is anticipated this program will result in decreased systems maintenance costs of current systems which will offset costs associated with maintaining this program as a long-term element of DHS IT services.

Benefit / Cost Ratio –

$14,983,500 / ($3,000,000 {State Share} / 3) = **14.98**

ROI –

($14,983,500 - $2,000,000) / $3,000,000 {State Share} = **433%**

Benefits Not Cost Related or Quantifiable –

1. This project is mandatory to achieve HF 2205 "completely 'e' by 2003".

2. Critical to DHS Action Plan covering Accountable Government, Reconnecting Iowans to their Government, and directly impacts DHS's ability to promote Healthy, Safe, Stable, and Self-Sufficient Iowans.

3. Eliminates legacy systems issues which must be addressed. Current opportunity costs between this initiative and other systems legacy issues is approximately $80 to $100 million.

ROI Financial Worksheet

IT Project Evaluation

Annual Pre-Project Cost - How You Perform The Function(s) Now

FTE Cost (salary plus benefits):	
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	
A. Total Annual Pre-Project Cost:	**N/A New Program**

Annual Post-Project Cost – How You Propose to Perform the Function(s)

FTE Cost:	
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	
B. Total Annual Post-Project Cost:	**N/A New Program**
State Government Benefit (= A-B):	**N/A New Program**

Annual Benefit Summary

State Government Benefit:	**$4,377,500**	
Citizen Benefit (including quantifiable "hidden taxes"):	**$10,606,000**	
Opportunity Value and Risk/Loss Avoidance Benefit:	**$80 - $100 Million**	**Not included in ROI or Benefit / Cost Ratio**
C. Total Annual Project Benefit:	**$14,983,500**	
D. Total Annual Project Cost:	**$1,000,000**	**State Share**
Benefit / Cost Ratio (C / D):	**14.98**	
ROI (C – D / Project Funds Requested):	**433%**	

X Benefits Not Cost Related or Quantifiable (including non-quantifiable "hidden taxes")